

1 MKDVESGRGRVLLNSAAARGDGLLLLGTRAATLGGGGGGLRESRRGKQGA kcnq5-
1 MKDVESGRGRVLLNSAAARGDGLLLLGTRAATLGGGGGGLRESRRGKQGA kcnq5-
51 RMSLLGKPLSYTSSQSCRRNVKYRRVQNYLYNVLERPRGWAFIYHAFVFL kcnq5-
51 RMSLLGKPLSYTSSQSCRRNVKYRRVQNYLYNVLERPRGWAFIYHAFVFL kcnq5-
101 LVFGCLILSVFSTIPEHTKLASSCLLILEFVMIVVFGLEFIIRIWSAGCC kcnq5-
101 LVFGCLILSVFSTIPEHTKLASSCLLILEFVMIVVFGLEFIIRIWSAGCC kcnq5-
151 CRYRGWQGRRLRFARKPFCVIDTIVLIASIAVVS AKTQGNIFATSALRSR kcnq5-
151 CRYRGWQGRRLRFARKPFCVIDTIVLIASIAVVS AKTQGNIFATSALRSR kcnq5-
201 FLQILRMVRMDRRGGTGWKLLGSV VYAH SKELITAWYIGFLVLIFSSFLVY kcnq5-
201 FLQILRMVRMDRRGGTGWKLLGSV VYAH SKELITAWYIGFLVLIFSSFLVY kcnq5-
251 LVEKDANKEFSTYADALWWGTITLTITIGYGDKTPLTWLGRLLSAGFALLG kcnq5-
251 LVEKDANKEFSTYADALWWGTITLTITIGYGDKTPLTWLGRLLSAGFALLG kcnq5-
301 ISFFALPAGILGSGFALKVQEQHROKHFEKRRNPAANLIQCVWRSYA ADE kcnq5-
301 ISFFALPAGILGSGFALKVQEQHROKHFEKRRNPAANLIQCVWRSYA ADE kcnq5-
351 KSVSIATWKP HLKALHTCSPTKKEQGEASSSQKLSFKERVMA SPRGQSI kcnq5-
351 KSVSIATWKP HLKALHTCSPTN-----QKLSFKERVMA SPRGQSI kcnq5-
401 KSRQASVGDRRSPSTDITAE GSPTKVQKSWSFNDRTFRFSLRLKSSQPK kcnq5-
392 KSRQASVGDRRSPSTDITAE GSPTKVQKSWSFNDRTFRFSLRLKSSQPK kcnq5-
451 PVIDADTALGTDDVYDEKGCQCDVSVEDLTPPLKTVIRAIRIMKFHVAKR kcnq5-
442 PVIDADTALGTDDVYDEKGCQCDVSVEDLTPPLKTVIRAIRIMKFHVAKR kcnq5-
501 KFKETLRPYDVKD VIEQYSAGHLDMLCRIKSLQTRVDQILGKGQITSDKK kcnq5-
492 KFKETLRPYDVKD VIEQYSAGHLDMLCRIKSLQTRVDQILGKGQITSDKK kcnq5-
551 SREKITA EHEHETDDLSMLGRVVKVEKQVQSIESKLDCLLDIYQQVLRKGS kcnq5-
542 SREKITA EHEHETDDLSMLGRVVKVEKQVQSIESKLDCLLDIYQQVLRKGS kcnq5-
601 ASALALASFOIPPFCEQTS DYQSPVDSKDLSGSAQNSGCLSRSTSANIS kcnq5-
592 ASALALASFOIPPFCEQTS DYQSPVDSKDLSGSAQNSGCLSRSTSANIS kcnq5-
651 RGLQFILTPNEFS AQTFYALSPTMHSQATQVPISQSDGSAVAATNTIANQ kcnq5-
642 RGLQFILTPNEFS AQTFYALSPTMHSQATQVPISQSDGSAVAATNTIANQ kcnq5-
701 INTAPKPAAPTTLQIPPLPAIKHLPRPETLHPNPAGLQESISDVTTCLV kcnq5-
692 INTAPKPAAPTTLQIPPLPAIKHLPRPETLHPNPAGLQESISDVTTCLV kcnq5-
751 ASKENVQVAQSNLTKDRSMRKS FDMGGETLLSVCPMVPKDLGKSLSVQNL kcnq5-
742 ASKENVQVAQSNLTKDRSMRKS FDMGGETLLSVCPMVPKDLGKSLSVQNL kcnq5-
801 IRSTEELNIQLSGSESSGSRGSQDFYPKWRESKLFITDEEVGPEETETDT kcnq5-
792 IRSTEELNIQLSGSESSGSRGSQDFYPKWRESKLFITDEEVGPEETETDT kcnq5-
851 FDAAPQPA REAAAFASDSLRTGRSRSSQSICKAGESTDALSLPHVKLK kcnq5-
842 FDAAPQPA REAAAFASDSLRTGRSRSSQSICKAGESTDALSLPHVKLK kcnq5-

Decoration 'Decoration #1': Shade (with solid black) residues that match kcnq5-1.PRO

Figure 1

1 MKDVESGRGRVLLNSAAARGDGLLLLGTRAATLGGGGGLRESRRGKQGARMSSLLGKPLS kcnq5.PR
1 MVQ-KSRNGGVYPGFSGEKKLVGFVGLDGPAPDSTRDGALLIAGSEAPKRGSILSKPRA fKCNQ2.PR
1 MAEAPPRLGLGPPPGDAPRAELVALTAVQSEQGEAGGGGSPRRLGLLGSPLPP-GAPLP fKCNQ4.pr

61 - - - YTSQSQR - - - - NVKYRRVQNYLYNVLERPRGWAFIYHAFVFLLVFGCLILSVFS kcnq5.PR
60 G-GAGAGKPKRNAP - - - - YRKLQNFLYNVLERPRGWAFIYHAYVFLLVFSCLVLSVFS fKCNQ2.PR
60 GPGSGSGSACGQRSSAAHKR YRRLQNWVYNVLERPRGWAFVYHVFI FLLVFSCLVLSVLS fKCNQ4.pr

113 TIPEHTKLASSCLLILEFVMIVVFGLEFIIRIWSAGCCCRYRGWQGRLLRFARKPFPCVIDT kcnq5.PR
114 TIKEYEKSSEGALYILEIVTIVVFGVEYFVRIWAAGCCCRYRGWRGRLKFKARKPFPCVIDI fKCNQ2.PR
120 TIQEHQELANECLLILEFVMIVVFGLEYIVRVWSAGCCCRYRGWQGRFRFRARKPFPCVIDF fKCNQ4.pr

173 IVLIASIAVVS AKTQGNIFATSALRSRLRFLQILRMVVRMDRRGGTWWKLLGSVVYAHSKELI kcnq5.PR
174 MVLIASIAVL AAGSQGNVFATSALRSRLRFLQILRMIRMDRRGGTWWKLLGSVVYAHSKELV fKCNQ2.PR
180 IVFVASVAVI AAGTQGNIFATSALRS MRFLQILRMVVRMDRRGGTWWKLLGSVVYAHSKELI fKCNQ4.pr

233 TAWYIGFLVLIFS SFLVYLVEKDANK E FSTYADALWWGTITLTITIGYGDKTP L TWLGRLL kcnq5.PR
234 TAWYIGFLCLILASFLVYLAEK GENDH FDTYADALWWGLITLTITIGYGDKYPTWN GRLL fKCNQ2.PR
240 TAWYIGFLVLIFASFLVYLAEKDANS D FSSYADSLWWGTITLTITIGYGDKTP HTWLGRVL fKCNQ4.pr

293 SAGFALLGISFFALPAGILGSGFALKVQEQHRQKHFEKRRNPAAANLIQ CVWRSYAAD - E K kcnq5.PR
294 AATFTLIGV SFFALPAGILGSGFALKVQEQHRQKHFEKRRNPAA GLIQSAWR FYATNLSR fKCNQ2.PR
300 AAGFALLGISFFALPAGILGSGFALKVQEQHRQKHFEKRR MPAANLIQA AAWRLYSTDM SR fKCNQ4.pr

352 SVSIATW - - - - - KPHLKA - LH - - - - - kcnq5.PR
354 TDLHSTWQYYERTVTVP MYRLIPPL - NQLELLRNLSKSG LAFRKDP PPEPSPS - - - - - fKCNQ2.PR
360 AYLTATWY YYDSIL - - - - - PSFRELALLFEHVQARNGGLRP - LEVRRAPVPDGA PSRYPPVA fKCNQ4.pr

367 TCSPTKKEQGEASSQKLSFKERVRMA SP - - RGQSIKSRQASVGD RRSPST DITAE G - SP kcnq5.PR
407 - - - - - QKVS LKDRV - FSSPRGVAAKKGKSPQAQT VRRSPSADQSL ED - SP fKCNQ2.PR
417 TCHRPGSTSFCPGESSRMGI KDRIRMGSSQRRRTGPS KQQLAPPTMPTSPSS EQVGEAT SP fKCNQ4.pr

424 TKVQKSWSFNDRTFR PSLRLKSSQPKFVIDADTALGTDDVYDEKGCQCDVSVEDLTTP L kcnq5.PR
450 SKVPKSWSFGRSRA RQAFRIKGAASRQNSE - EASLPGEDIVDDKSCPCFVTE DLTTPGL fKCNQ2.PR
457 TKVQKSWSFNDRTFRASLRL - - - - - KPRTSAEDA - PSSEVAE EKS YQCELTVD DIMPAV fKCNQ4.pr

484 KTVIRAIRIMKFHVAKRKFKETLRPYDVKDVI EQYSAGHLDMLCRIKSLQTRVDQILGKG kcnq5.PR
509 KVSIRAVCVMRFLVSKRKFKESLRPYDVMDVIEQYSAGHLDMLSRIKSLQSRVDQIVGRG fKCNQ2.PR
531 KTVIRSIRILKFLVAKRKFKETLRPYDVKDVI EQYSAGHLDMLGRIRKSLQTRVDQIVGRG fKCNQ4.pr

544 QITS DKKSREKIT - - - AEHETTDDL SMLGRVVKVEKQVQSIESKLDCLLDIYQOV L RKG S kcnq5.PR
559 PAITDKDR - - - - - TKGPAAELPEDPSMMGR L GKVEKQVLSMEKKLDFLVNIYMQ - - - - - RMGI fKCNQ2.PR
591 P - - GDRKAREKGDKGPSDAEVVDEI SMMGRVVKVEKQVQSIEHKLDDL L L G FYSRCLRS GT fKCNQ4.pr

601 ASA LALAS FQFPFCEQTS DYQSPVDSKDL S GSAQNS GCLSRSTSANISRGLQFILT PN kcnq5.PR
623 PPTETEAYFGAK - - - EPEPAPPYHSPEDSRE - - - HVD RHGCI VKIVRSSS STG - - - - - QK fKCNQ2.PR
649 SAS LG - - AVQVPLFPDI TSDYHSPVDHEDISVSAQT - - - - - fKCNQ4.pr

661 EFSAQTFYALSPTMHSQATQVPIS QSDGSAVAATNTIANQINTAPKPAAPTTLQIPPLP kcnq5.PR
672 NFSAP - - - PAAPPVQCPPSTSWQP QSHPRQGHGTS PVGDH - - - - - GSVLRIPPPPA fKCNQ2.PR
684 - - - - - fKCNQ4.pr

721 AIKHLPRPETLHPNPAGLQESISDVTTCLVASKENVQVAQSNLT KDRSMRKS FDMGGET L kcnq5.PR
720 HERSLSAYGGGNRASMEFL-RQEDT PGC - - - - - RPPEGTL - - - - - RDSDTS fKCNQ2.PR
684 - - - - - fKCNQ4.pr

781 LSVCPMVPKDLGKSLSVQNLIRSTEELNIQLSGSESSGSRGSQDFYPKWRESKLFITDEE kcnq5.PR
760 LISIPSV DHEELERSFSGFSISQSKENLD - ALNSCYAAVAPCAK - - - - - VRPYIAEGE fKCNQ2.PR
684 LSISRSVSTNM - - - - - fKCNQ4.pr

841 VGPEETETDTFDAAFPAREAAAFAS DSLRTGRSRSSQSICKAGESTDALS LPHVKLK . kcnq5.PR
811 SDTSDSLCTPCGPPERSATGEGPFGDVGWACPRK fKCNQ2.PR
695 - - - - - fKCNQ4.pr

Decoration 'Decoration #1': Shade (with solid black) residues that match the Consensus

Figure 2

Fig. 3 A.)

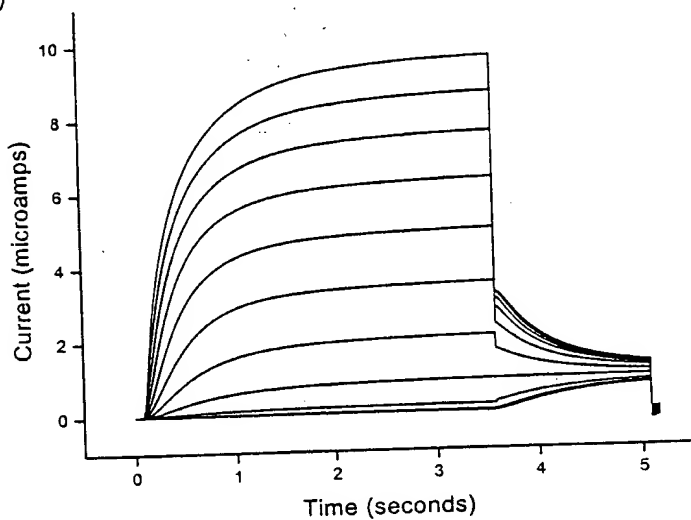


Fig. 3 B.)

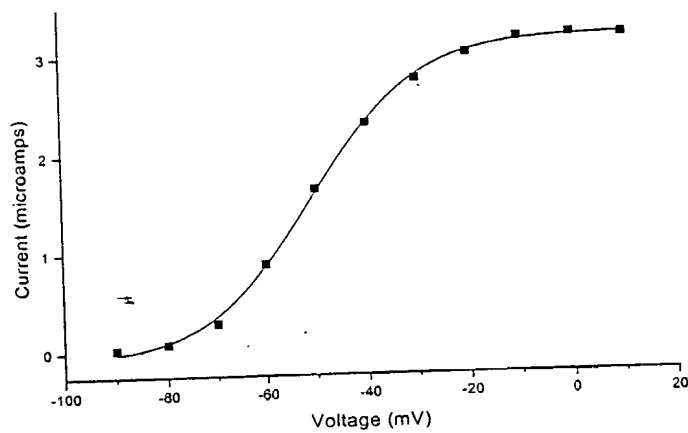


Figure 3

SCANNED, # 6

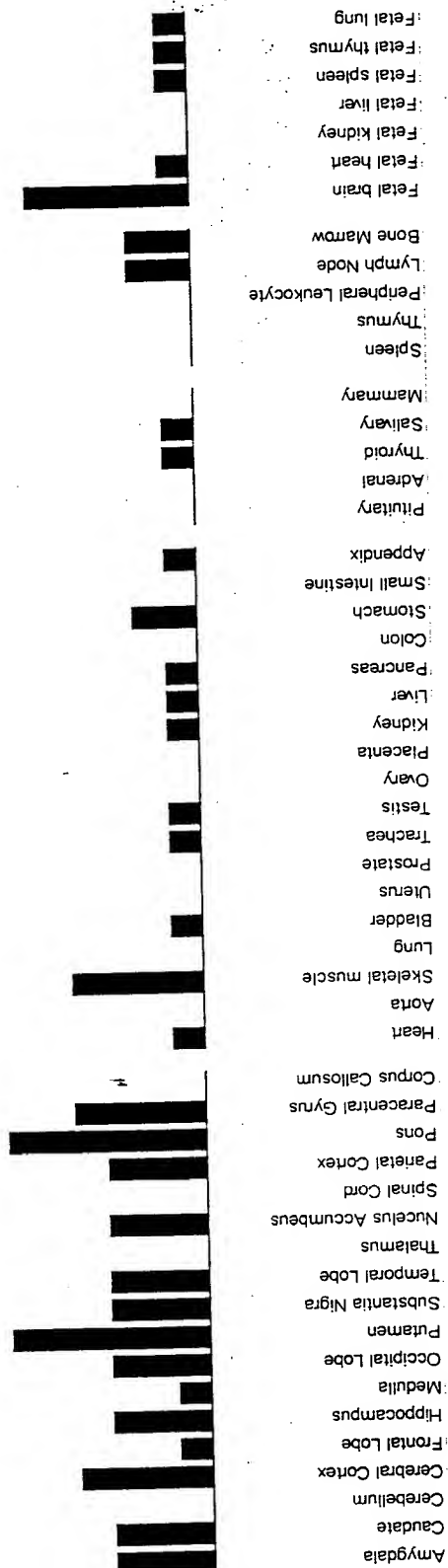


Figure 4